

THYMELAEA PASSERINA (THYMELAEACEAE)

NEW TO TEXAS

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Thymelaea passerina (L.) Cosson & J. Germain was first reported in the United States by Pohl (1955). In reporting *T. passerina* as new to Ohio, Vincent and Thieret (1987) presented an expanded account of the occurrence of the species in the United States, mentioning its presence in Illinois, Iowa, Kansas, and Nebraska. Additionally, *Thymelaea passerina* has also been reported from Alabama (Webb et al. 1997), Mississippi (Wofford & DeSelm 1988), Washington (USDA, NRCS 1999), and Wisconsin (Harriman 1979). The species is not cited in any of the recent references or checklists treating the flora of Texas (Correll & Johnston 1970; Hatch et al. 1990; Johnston 1990; Jones et al. 1997), nor is it included in Diggs et al. (1999) in their flora of the north central part of the state. A description of the species and pertinent synonymy follow.

Thymelaea passerina (L.) Cosson & J. Germain, *Syn. Fl. Env. Paris*, ed. 2, 360. 1859. (**Fig. 1**).
Stellera passerina L., *Sp. Pl.* 559. 1753. Complete synonymy given by Tan (1980).

Taprooted annual to 55–60 cm tall; stems erect, slender, simple or more commonly with few to several ascending branches in distal half, glabrous or weakly pilose distally, yellowish green; leaves alternate, simple, exstipulate, sessile or nearly so, linear-lanceolate, 7–15 mm long, 1–2 mm wide, stiffly chartaceous or subcoriaceous, glabrous or less commonly abaxially weakly puberulent, apex acute, margins entire. Inflorescence axillary, flowers often 3 but ranging from 1–7 in distal leaf axils, cluster commonly subtended by 2 green bracts, bracts lanceolate to broadly so, to ca. 1.5 mm long, basally ciliate; flowers bisexual, actinomorphic, perigynous, sessile, 2–3 mm long, corollas absent, sepals 4, weakly

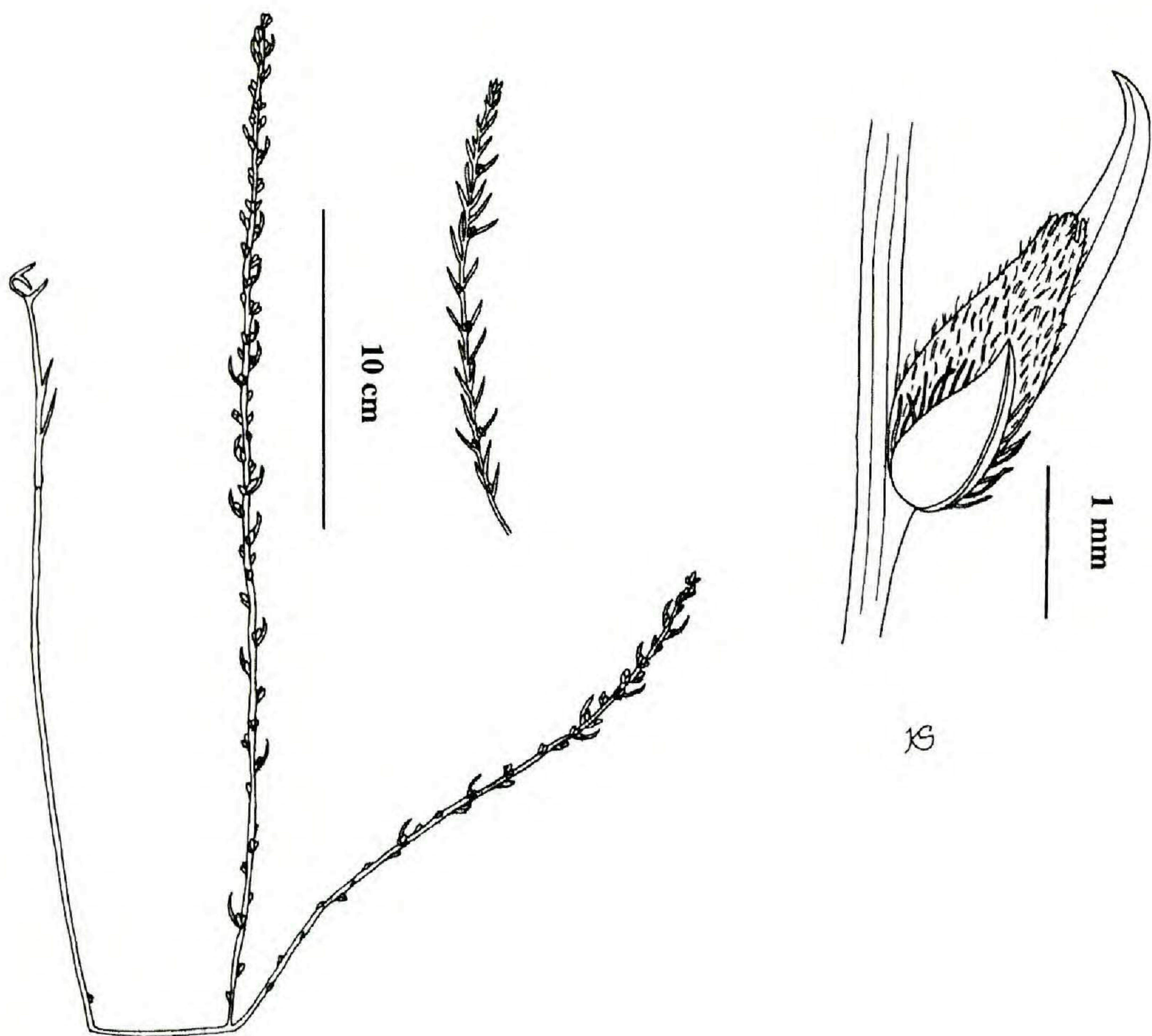


FIG. 1. *Thymelaea passerina*. Left, habit; Center, younger branch before loss of some leaves; Right, persistent hypanthium with enclosed fruit. [From Vincent and Thieret in Sida 12:77. 1987. Used with permission.]

petaloid, manifested as minute (ca. 0.5 mm long) ovate to lance-ovate greenish yellow lobes with obtuse apices on top of the urceolate, persistent hypanthium, hypanthium and calyx lobes substrigose, stamens episealous, 8, bicyclic, included, filament much shorter than the anther thecae, ovary superior, apically hirsute-villous, subtended by a hypogynous disk, bicarpellate but unilocular by abortion, style one, terminal, short, ovule one, pendulous. Fruit a dry, indehiscent, 1-seeded, 1-locular capsule, apically beaked, enclosed within the persistent hypanthium; seed ovoid, 2–3 mm long, brown to black. Chromosome number $2n = 18$.

This Eurasian weed of *Thymelaea* section *Lygia* (Tan 1980) has been reported within the United States from Alabama (Webb et al. 1997), Illinois (Mohlenbrock & Ladd 1978), Iowa (Pohl 1955), Kansas (McGregor et al. 1986), Mississippi (Wofford & DeSelm 1988), Nebraska (Pohl 1955), Ohio (Vincent & Thieret 1987), Washington (USDA, NRCS 1999), Wisconsin (Harriman 1979), and is here newly documented for the flora of Texas. It has also been introduced into Australia. Flowering time for the North American populations ranges from (April) June to September.

Specimens cited: **TEXAS. Denton Co.:** approximately 5 mi E of Sanger on FM 455, 24 Jun 1999, *Singhurst 8156* (BAYLU, TEX, US). **Fannin Co.:** 0.5 mi E of Haile Community on FR 1550, N 33.51173, W 96.05437, 5 Jun 1999, *Holmes 10173 & Singhurst* (BAYLU, TEX, US).

We believe that the species was likely introduced to Texas through the use of agricultural machinery imported from further north and used to harvest wheat, the dominant crop in both areas. The Denton County specimen is from the Cross Timbers and Prairies vegetational region of the state, an area characterized by slightly acidic to acidic sandy loam soils (Correll & Johnston 1970). Associated species included *Dalea purpurea*, *Indigofera miniata* (Leguminosae), *Froelichia floridana* (Amaranthaceae), *Helianthemum georgianum*, *Lechea mucronata*, *L. tenuifolia* (Cistaceae), *Hypericum drummondii* (Hypericaceae), and *Krameria lanceolata* (Krameriaceae). The Fannin County specimen occurred in the margins of roads and wheat fields in clay over limestone "chalk" on the Gober Limestone Formation of the Blackland Prairie vegetation region of the state. Common associates included *Asclepias asperula* (Asclepiadaceae), *Forestiera pubescens* (Oleaceae), *Hypericum perforatum* (Hypericaceae), *Rhus aromatica* (Anacardiaceae), *Sedum pulchellum* (Crassulaceae), and *Sophora affinis* (Leguminosae).

The documentation of *Thymelaea passerina* as new to Texas is not only a report of a new genus and species to the known non-cultivated flora of the state, but another family, the Thymelaeaceae. Jones et al. (1997), in their checklist of the vascular flora for the state, included two species of Thymelaeaceae, *Daphne cannabina* Wall. (= *D. papyracea* Wall. ex Steud. according to Huxley 1992) and *D. cneorum* L., but both of these are cultivated and not known to escape in Texas.

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